2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

and its crags, Ha-ba nv-lv or Ha-ba ndshĕr nv-lv (Ha-ba Snow peak), 18,700 feet in height.

Arrived at the edge of the deep Ta-shen-kou ravine, elevation 7,150 feet, which has its source on Ha-ba nv-lv, the trail leads up it, narrow and precipitous in the extreme. The lower slopes are grass-covered, with here and there pure stands of cane-brake (*Arundinaria*). At the wooden bridge which spans the torrent of the ravine one beholds grandeur of scenery which is difficult to describe. The two sides of the yellowish-red cliffs, sheer and precipitous, form a gate lined with a few evergreen oaks with golden foliage (*Quercus semicarpifolia*), through which one views the deeply cleft and crenellated limestone wall rearing its pinnacled, snow-capped crown thousands of feet into the turquoise-blue sky, and at its foot the blue-green surging waters of the Yangtze. (PLATE 126). Indeed a picture of indescribable beauty.

From the bridge, elevation 7,450 feet, the trail ascends the vertical wall of Ta-shen-kou in zigzags to an elevation of 8,000 feet; a bluff here overlooks the Yangtze, which flows over 2,000 feet below. From the bluff the trail leads into a large and broad amphitheater-like depression sloping steeply to the Yangtze. At an elevation of 7,800 feet, is a village of Chinese squatters from Ssu-ch'uan called Ho-t'ao-yüan 核桃園 (Walnut garden). Its name in Na-khi is Yü-hoa-t'an (Sheep nest bottom). Fourteen families dwell here in utter isolation: the most forlorn, rocky, dusty, waste imaginable. Its fields are narrow terraced strips with scattered mounds of rocks.

In this waste Ssu-ch'uanese have settled for 60 years and built their houses of stone. The people are filthy to a degree, black with the grime of years, their garments rags of hemp cloth, their untanned goatskin jackets sewn together haphazardly, the edges of the ragged skins not even trimmed. The majority of these people are cretins, indifferent to their surroundings, they rummage from hill-side to hill-side to find enough to keep body and soul together. A tiny spring, shaded by a willow, in the center of the dreary waste forms their water supply. How the name "Walnut garden" originated is not known, for not a single tree of that species is visible.

From this village the ground rises steeply to the foot of the forested cliffs. Here the entire landscape appears to have undergone some terrific convulsion, for half the mountain-side lies about in enormous boulders or blocks of rocks a hundred or more feet across. It is as if the mountain had been split with a giant crowbar into myriads of pieces scattered over the hill-sides. Among these ruins a few Chinese have built their homes of rock, using the boulders as part walls for their cheerless, dreary abodes.

Passing by these stone dwellings the trail ascends the limestone cliffs through oak forests to the top of the spur at 9,150 feet elevation, and thence skirts the wild and stupendous rock walls, with chutes and landslides 4,000 feet in length descending everywhere. It leads to another bluff 9,700 feet in height where some lonely pines cling to it by the side of the trail which has been cut out of the living rock. We continue to skirt the terrific cliffs, now forested with oaks, cane-brake, pines, and lovely rhododendron bushes with from pale pink to deep rose-red flowers. We have left the arid belt and a cool breeze makes climbing easier. On and on we go skirting the vertical walls of this deep canyon, and in a final effort, as if to conquer all, the trail leads in zigzags to the

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

rainy season becomes a large pond, we emerge onto a plateau of reddish soil with bushes of Cotoneaster, wild pears, and scrub-pines.

We descend into the Gyi-na lo gorge from a bluff overlooking it (7,700 feet elevation) to a bridge which spans the torrent at an elevation of 7,300 feet. Ascending the other side of the valley we strike the first hamlet in Bběr-ddĕr in a shallow basin with terraced fields, called Bu-du-wùa, at an elevation of 7,600 feet. Here we met the first Bběr-ddĕr Na-khi, a most painfully polite people, who knelt down and kowtowed at our approach. The young men are stalwart fellows, tall and well built; they wear homespun hemp-cloth trousers and jacket of a dull white to light gray, and either go barefoot or wear straw sandals (PLATE 134). The front half of the head is shaven, the hair plaited in a queue at the back. When asked why they still wear queues, they replied that if they cut them off the Tibetans would kill them. They live in constant fear and dread of the Chung-tien and Hsiang-ch'eng Tibetans.

From Bu-du-wùa, with its friendly people, we turned again towards the mountains, passing through rice-fields and crossing a small ravine, after which we arrived at a hamlet on a hill-top called Bpu-wùa, elevation 8,300 feet. Here also the people were very friendly and all volunteered to help, some to guide us and others to see that the caravan should not miss the trail.

The limestone spring and terraces of Bběr-p'ĕr-dtĕr. — From Bpu-wùa we followed along the hill-side to a deep ravine with the most peculiar limestone terraces and sinter basins, a miniature Yellowstone or Roturua, minus geysers and hot springs. These terraces, which extend deep down into the ravine, are called Bběr-p'ĕr-dtĕr and are at an elevation of 8,650 feet. The valley in which they are situated is called Bběr-p'ĕr-dshi.

The terraces owe their origin to a carbonate-of-lime-bearing spring flowing from a hill which on its south side is attached to the mountain spurs; to the west and north the hill is surrounded by deep ravines which descend from the Ta-ra mountains in the west and immediately behind it. The hill is several hundred feet high and the spring in its center, shaded by oaks and willows, is clear as crystal, only about two feet deep and about four feet in diameter (PLATE 135). In the immediate neighborhood of the spring all appears normal, yet some 10 to 15 feet away the water, which flows gently over a grassy flat, has built up shelves of calc-sinter which appear as if floating on the surface of the deep clear pools. Every shrub and plant is encrusted with a thick layer of carbonate of lime. Beyond the pools is a flat of cream-colored limestone, composed of myriads of petrified ripples or fine corrugations, deposited by the wavelets of the carbonate-of-lime-bearing water.

Thus was built up a succession of marvellous terraces over the entire hill, created bulging promontories with shallow basins, the water flowing gently and noiselessly over these queer structures, ever depositing its sediment. The basins and terraces have all the appearance of being artificial. Some resemble a terraced, flooded rice-field awaiting planting, save that the water is a bluish-white and the banks of the terrace a creamy-yellow, with millions of corrugations, every wavelet a thin shell of lime, of which there must be thousands of layers. The whole structure sounds hollow as one walks over it, but it does not break. With the continuous deposit from the gently flowing waters the ter-

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

arch bridge by a small hamlet consisting of a few houses. The trail leads on the east bank of the stream along the foot of a rocky mountain slope composed of reddish-purple boulders. The vegetation consists mainly of bushes such as Corylus and Escholtzia. The mountains rise to about 2,000 feet on the west bank, and 3,000 feet on the east bank, with secondary parallel ridges. Terraced rice-fields extend along the banks, but well above the river. On the west bank is situated the village of Hsiao-ma-ch'ang 小馬廠. Here the slopes of the mountain are covered with tall forests of *Pinus yünnanensis*. One li beyond we come to a few houses which compose the village of Ta-ch'iang-pa 打槍壩, also situated on the west bank. The river winds considerably, passing through a small rocky defile, the trail following downstream on the east bank. The path becomes narrower and almost impassable due to many wash-outs and projecting boulders. About a hundred feet above the stream on the west bank is the hamlet of Ma-li-p'ing 麻梨坪.

We cross a small tributary and follow the ever-narrowing trail, which in places is really perilous, winding up and down and around hill-sides, then again through groves of oaks and *Cornus capitata* trees, pears, Rhamnus, and Berberis, until we come to the poorest village so far encountered; it is called La-p'u-wan 腊普灣 (also written 剌普灣). Soon we come to another village called Chuang-fang 庄房; here the river is very narrow and strewn with huge boulders, a wooden bridge crossing it. The hamlet is on the east bank almost at the level of the river-bed. A little over a li brings us to the Tibetan village of Wua-shi (Wa-shih 瓦石). About 30 li to the west of this place a quicksilver mine is said to exist. Red sandstone and gray grits with patches of manganese dioxide and iron oxide are to be found at Wua-shi (GREGORY).

The valley becomes considerably narrower with rather steep slopes.

Ka-ka-t'ang village. — Ten li more and we arrive at the narrow, filthy conglomeration of huts and pigsties which calls itself the village of Ka-ka-t'ang 戛戛塘. Near the entrance to the village is a spring enclosed in a square rock basin over which a tiny Lung-wang shrine had been built. Fish swam peacefully in it. The inhabitants nearly all have goitres, some of extraordinary size, almost as large as the head itself.

From Ka-ka-t'ang a trail leads east across a pass and along the valley of the Chung-ch'iu Ho 中秋河 to La-p'u. The Chung-ch'iu Ho has its source on the northern slopes of the Li-ti-p'ing and flows first parallel with the Yung-ch'un Ho and then turns straight north there it is called La-p'u Ta-ho; it bends east at La-p'u, and debouches into the Yangtze at Ch'i-tsung 其宗. The Chinese military map of Yün-nan gives its source south of Pong-tse-ra and ignores two high passes between Pen-tzu-lan 奔子闌 and La-p'u, thus making the stream flow over the passes south, instead of from south to north. Davies' map is here also completely wrong, for the two sources of his stream, one in the Kar-ri La and the other in the Ponge La, a pass 12,150 feet in height, flow together on the map, but have no outlet. The Yon-dze-khà, which is the Tibetan name of the stream, rises in the Pai-mang Shan and flows south, but above Rong-sha (Lo-she 洛舍); it then flows east and debouches into the Yangtze.

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

thence to Ta-shui-kou 大水溝 situated on a bend of the great river. Twenty li beyond Huan-fu-p'ing we come to an exceedingly narrow part of the Mekong gorge, arid in the extreme, and scarcely more than a trench. The trail which leads through the gorge is passable for porters only, while the mule caravans pass over the mountain-side at its entrance, emerging near Nyi-thang (Ta-pa-tzu 大壩子). This gorge is called Do-lung [42] in Tibetan, and To-lo 多洛 in Chinese. The trail is one of the worst on the entire stretch to A-tun-tzu, and is simply an echelon, built by means of slender props against the cliff, a sort of trestle-work spanning a chasm. Where the Mekong enters the gorge there is a fierce rapid but in the gorge itself the river flows placidly enough. Nyi-thang [43] called To-lo-t'ang 多洛塘 in Chinese, is a Tibetan village situated on a flat spur north of the Do-lung gorge, and consists of a few houses only (PLATE 165).

Money is here valueless, for the peasants of this area will sell nothing, but are willing to exchange grain or other victuals for salt and coarse Chinese tea, two commodities unobtainable in this region. The peasants are much afflicted with goitre.

From here one has the first glimpse of the mighty promontory of the Kha-wa-kar-po [44] range, Mt. Me-tse-mo,[45] the southernmost and highest mountain of that magnificent divide. On a manuscript map of the district of A-tun-tzu in the Provincial Library at K'un-ming, the range is marked Yung-chih hsüeh-shan 庸支雪山, after a village called Yung-chih, situated on the eastern slopes, and on the west bank of the Mekong. The northern end of the same range is marked as Tu-ch'ü-ling hsüeh-shan 都取嶺雪山. Mt. Me-tse-mo is a wonderful dome, standing separately and projecting from the rest of the range; it is covered with immense masses of snow, with buttresses on each side at the base of the peak. In the early hour of dawn the dome looked a death-like grey, cold and forbidding, but as soon as the sun shone on its almost vertical snow-fields it turned to a rich pink, while the Mekong valley was still sleeping in deep, gloomy shadows.

The trail leads past a narrow lateral gorge and then opposite the Lung-dre canyon which debouches from the west, misty and mysterious, into the Mekong. Up Lung-dre gorge a trail leads to the Zhi-dzom La (bZhi-hdzom-la) [46] and to the Salween.

Yang-tsa village. — Cypress trees (*Cupressus Duclouxiana*) line the Mekong river banks; the valley becomes narrower and more arid, the walls steep and furrowed by huge land-slides. The hamlet of Se-ra-thang (Se-lo-t'ung 色勒通) is here situated on a small meadow with the mountain walls rising steeply back of it. A few li beyond and the scenery is still more arid save for the cypress trees; not far beyond is the village of Yang-tsa 羊咱, also called La-tsa 拉咱, a few scattered houses among boulders. Three rope-bridges are stretched across the river here (PLATE 166). In the autumn

[42] rDo-lung རྡོལུང (Rock valley). [43] ཉེ་ཐང Nyi-thang or gNyis-thang གཉིས་ཐང

[44] Khwa-dkar-po ཁྭ་དཀར་པོ or Kha-wa-dkar-po gangs-ri [45] sMad-rtse-mo སྨད་རྩེ་མོ

[46] bZhi-hdzom-la བཞི་འཛོམས་ལ།

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

has its source on the western slopes of Pai-mang Shan 白忙山 (also written 芒 and 笠), which are visible through Yeh-tsi valley. Part of the waters of its stream are led by ditches to the village, which is inhabited by Tibetans only. The sky is an azure blue, the atmosphere crystal clear, making every rock stand out sharply defined.

In this valley is situated the Hung-p'o 紅坡 Lamasery, called Yang-pa-chen-ling (Yangs-pa-chan-gling,[80] Yang-pa-ching Ssu 楊八景寺), which belongs to the Yellow sect, perhaps so named after a monastery in northern Tibet of the same name. It is, however, also the name of a city in Magadha on the site of modern Allahabad. The lamasery was built in the 18th year of Ch'ien-lung (1753). Hung-p'o is known in Tibetan as Ngü-phu,[81] from *dngul*, silver, and *phu*, the upper part of a sloping valley. There are also two villages called Hung-po, one north and one south of the lamasery.

Ngun-ya village. — Beyond Yeh-tsi we cross a spur and follow along the now more gently sloping hill-side, past another gap, and arrive at the village of Ngun-ya (Kuo-nien 果念); this is entirely inhabited by Na-khi, and is the last pure Na-khi village in north-west Yün-nan. There are, however, other villages inhabited either wholly or in part by Na-khi, across the Yün-nan border in Hsi-k'ang.

At Ngun-ya, or Gun-ya, the Mekong flows in a deep trench imprisoned by steep rock walls. It makes a sharp curve to the east, flows through a defile and encircles the spur on the southern slopes of which Ngun-ya is situated; it makes in fact a double horseshoe bend. (PLATES 168). Beyond Ngun-ya it flows through a very narrow gorge with a tributary descending through a rocky, arid canyon with the pinnacles of the high mountains visible in the distance.

Fuel is scarce here, the nearest wooded mountain being Pai-mang Shan to the east. The people of Ngun-ya are very friendly and helpful to the traveler, quite a contrast to the surly attitude of the people of Yeh-tsi. They are, however, sorely afflicted with goitre. On the road one meets now only Tibetans, stalwart fellows who greet one with upturned hands raised to about the chest — survival of an ancient custom to show that the hands hold no arms.

All along the Mekong on small promontories are more or less ruined watch-towers built of mud bricks (PLATE 169) their walls pierced with loop-holes. It used to be, and still is, the belief that these towers were built by the ancient Na-khi chief Mu Sheng-pe (Mu Sen-pe, as it is pronounced by the Na-khi). But, as has already been related, they were not erected by the Na-khi rulers but by the T'u-fan, against the invasion of Na-khi soldiers led by their chiefs. These towers are to be found all along the Chinese — Tibetan, not political, but ethnic border. They are common north in Mu-li, on the Zho Chhu, on the hills in the Li-t'ang River valley, on the Ya-lung, and in the region of Chiu-lung hsien 九龍縣, south of Ta-chien-lu. They form, in fact, an ethnic boundary line from the Mekong to the Ta-tu Ho 大渡河.

From the gorge beyond Ngun-ya the trail again climbs the rocky, steep

[80] ཡངས་པ་ཆན་གླིང་ [81] dNgul-phu དངུལ་ཕུ